

**In the United States Patent and Trademark Office**

Serial Number: \_\_\_\_\_

Appn. Filed: \_\_\_\_\_

Applicant: Ronald F. Balingit

Appn. Title: Smoke Collector for Diesel Engines

Examiner/GAU: \_\_\_\_\_

Mailed 2004 Feb. 20  
Agoura Hills, CA

**Information Disclosure Document**

Commissioner of Patents and Trademarks  
Washington, District of Columbia 20231

Sir:

Attached is a completed Form PTO-1449 and copies of the pertinent parts of the references cited thereon. Following are comments on these references pursuant to Rule 98.

**Hartwick** shows a self-cleaning smoke filter utilizing water sprays inside a channel provided with baffles.

**Doyle, et al.**, shows an integrated injection and bag filter house system for SO.sub.x-NO.sub.x-particulate control with reagent/catalyst regeneration.

**Richerson** shows a cyclonic separator with internal baffles to force the gas stream in two directions, and can be enhanced by electrostatic separation.

**Altman, et al.**, shows an electrostatically enhanced separator which combines centrifugal separation and electrostatic separation.

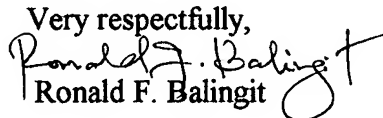
**Paul** shows a particulate separator which combines centrifugal separation with moisture feeding or electrostatic separation.

**Truhan** shows a cyclone type air/particulate concentrator and collector with improvements in the gas inlet scroll and the gas discharge scroll.

**Pirsh** shows a filter house having catalytic filter bags for removing NO.sub.x and particulate matter.

None of the references shows a process for collecting particulates from a gas stream comprising the steps of **increasing** the **relative humidity** of the gas stream and **compelling** the gas stream to **interact** with a cold **solid surface**.

None of the references shows a particulate collector that relies on the **condensation** of water vapor on a **solid surface** as the primary principle of particulate collection.

Very respectfully,  
  
Ronald F. Balingit

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ENC: PTO-1449 & References

## LIST OF PRIOR ART CITED BY APPLICANT

(Use several sheets if necessary)

MAILING

APPLICANT

Balingit, R.F.

FILING DATE

2004 Feb. 20

GROUP

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA		4 0 6 1 4 7 8	1977	Hartwick	96	356	
AB		4 7 9 3 9 8 1	1988	Doyle, et al.,	423	239.1	
AC		4 9 2 7 4 3 7	1990	Richerson	55	349	
AD		5 6 8 3 4 9 4	1997	Altman, et. al.,	96	55	
AE		4 2 3 9 5 1 3	1980	Paul, et. al.,	96	48	
AF		4 2 4 6 0 1 3	1981	Truhan, et. al.,	55	340	
AG		4 3 0 9 3 8 6	1982	Pirsh	422	177	
AH							
AI							
AJ							
AK							

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
AL								
AM								

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AR		
AS		

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.